

## REMARKS

This Response is filed in reply to the Office action dated January 30, 2007. No claims are amended or cancelled in this paper. Accordingly, after entry of this Amendment and Response, claims 1-45 remain pending.

### I. Claim Rejections Under 35 U.S.C. § 102

#### **A. Rejection of Claims 1, 4, 6-7, 12, 15-18 and 20**

Claims 1, 4, 6-7, 12, 15-18 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,812,793 to Shakib et al. (hereinafter "Shakib"). The rejection of claims 1, 4, 6-7, 12, 15-18 and 20 is respectfully traversed because Shakib is insufficient to anticipate the claims.

An anticipation rejection requires that each and every limitation of a claim be disclosed in a single prior art reference. Initially, the rejection of independent claims 1, 7 and 18 is addressed. Independent claims 1 and 18 include the limitation "instructing a first data replication facility at said first computer to replicate said first data volume and to send the replicate to multiple remote data volumes." That is, when instructed, a first computer replicates a data volume and sends the replica to multiple remote data volumes. The Office action relies on Shakib to disclose this limitation (see *Office action*, page 3). We respectfully disagree. Shakib teaches that each server periodically broadcasts new locally made changes to all other servers with a copy of the same replication data set (see *Shakib*, column 4, lines 28-32). That is, Shakib sends changes to the replica to other servers having the replica rather than replicating the data volume and sending the replicate to multiple remote data volumes as required by independent claims 1 and 18. Insofar as Shakib does not teach all the limitations of independent claims 1 and 18, it cannot anticipate them.

Independent claim 7 includes the limitations "receiving a data volume at said data replication facility of a first of said computers..." and "replicating said data volume from said first of said computers to multiple other ones of the computers." Shakib does not disclose such a limitation. Shakib discloses a server that periodically broadcasts locally made changes to other servers (see *Shakib*, column 4, lines 28-30), but does not disclose replicating the data volume to multiple other ones as required by independent claim 7. Insofar as Shakib does not teach all the limitations of independent claim 7, it cannot anticipate it.

Therefore, for at least these reasons, independent claims 1, 7 and 18 are patentable under 35 U.S.C. § 102 over Shakib, and such indication is respectfully requested. The remaining rejected claims 4, 6, 8, 12, 15-17 and 20 all depend, either directly or indirectly from one of independent claims 1, 7 and 18. Accordingly, dependent claims 4, 6, 8, 12, 15-

17 and 20 are themselves patentable over Shakib for the same reasons and such indication is respectfully requested. This statement is made without reference to or waiving the independent bases of patentability within each dependent claim.

**B. Rejection of Claims 22-36 and 38-44**

Claims 22-36 and 38-44 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,718,347 to Wilson (hereinafter “Wilson”). This rejection is respectfully traversed because Wilson is insufficient to anticipate claims 22-36 and 38-44 for at least the following reasons.

Initially, the rejection of independent claims 22, 31 and 39 is addressed. Independent claim 22 includes the limitations “*replicating data from said first network location* to a first remote network location of said one or more remote network locations” and “*replicating at said first remote network location* of said one or more remote network locations, *said replicated data from said first network location* to a second remote network location of said one or more remote network locations to allow said first network location to perform said remote data mirroring across multiple remote network locations.” Independent claims 31 and 39 include similar limitations. That is, data is replicated at a first location and sent to a remote location that in turn replicates the data and sends it to another remote location.

The Office action relies on Wilson to disclose such a limitation (see *Office action*, pages 5, 7 and 9). We respectfully disagree. Wilson discloses updating a first logical volume of data stored on the first storage system with a first set of data transferred from the first computer to the first storage system. The first set of data is an update to the first logical volume rather than a replication of the first logical volume. This data update is also sent to a second storage system via a separate communication path that does not pass through the first computer (see *Wilson*, column 3, lines 4-10). As such Wilson discloses updating a volume at a first location that is sent to a first remote location, but does not disclose replication of the data at the first remote location to a second remote network location to perform remote data mirroring across multiple remote network locations as required by independent claims 22, 31 and 38.

Accordingly, for at least this reason, independent claims 22, 31 and 39 are patentable under 35 U.S.C. § 102 over Wilson, and such indication is respectfully requested. The remaining rejected claims 23-30, 32-36, 38 and 40-44 depend, either directly or indirectly, from one of independent claims 22, 31 and 39. These dependent claims are themselves patentable over Wilson for at least the same reasons and such indication is respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 103

Claims 2-3, 5, 8-11, 13-14, 19 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shakib in view of Wilson. This rejection is respectfully traversed. These claims all depend, either directly or indirectly from independent claims 1 and 7. As stated above, Shakib does not disclose all limitations of claims 1 and 7. Further, Wilson does not disclose or suggest the limitation "instructing a first data replication facility at said first computer to replicate said first data volume and to send the replicate to multiple remote data volumes." As such, neither Shakib nor Wilson disclose all limitations of the independent claims. Therefore, dependent claims 2-3, 5, 8-11, 13-14, 19 and 21 are also patentable over Shakib in view of Wilson and such indication is respectfully requested.

III. Conclusion

The Applicant thanks the Examiner for his thorough review of the application. The Applicant respectfully submits the present application, as amended, is in condition for allowance and respectfully requests the issuance of a Notice of Allowability as soon as practicable.

The Applicant believes no fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 04-1415 as necessary.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney.

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Respectfully submitted,



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